WEST Search History

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DATE: Wednesday, March 01, 2006

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		DB=PGPB; PLUR=YES; OP=ADJ	
☐	L1	((edg$5 or border$5 or boundar$5) with select$5 with dilat$5).clm.	5

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Search Results - Record(s) 1 through 3 of 3 returned.

☐ 1. Document ID: US 20050062995 A1

Using default format because multiple data bases are involved.

L3: Entry 1 of 3 File: PGPB Mar 24, 2005

PGPUB-DOCUMENT-NUMBER: 20050062995
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20050062995 A1

TITLE: Method of selective edge softening and rendering for the suppression of halo

PUBLICATION-DATE: March 24, 2005

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY
Loce, Robert P.	Webster	NY	US
Cuciurean-Zapan, Clara	Fairport	NY	US

US-CL-CURRENT: 358/1.9; 358/3.03; 358/3.06, 358/3.19, 358/3.26, 358/534, 382/257

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw Desc | Ima

☐ 2. Document ID: US 20040085557 A1

L3: Entry 2 of 3 File: PGPB May 6, 2004

DOCUMENT-IDENTIFIER: US 20040085557 A1
TITLE: Method of selective edge softening and rendering for the suppression of halo

Detail Description Paragraph:
[0027] FIG. 2 shows a possible result to the data in FIG. 1 after dilation. Shapes 100 and 102 have been dilated and softened, which results in the moving of their respective edges 101 and 103, some number of pixel locations outward relative to the center of their respective shapes, and introducing new pixel values to give the edge a preferred magnitude and gradient of values. In a preferred embodiment, the dilation is selective. Selective dilation here is the same as conditional dilation but has wider meaning and applicability. To explain selective dilation we must first discuss what conditional dilation is. In the art, conditional dilation is applied where the dilated result would lie within a predefined set. In the present case, a neighboring edge would be that predefined object. This means typically that only the shape edges which are touching or coincident with the edge of another shape edge are morphologically dilated. The dilation is performed only on that part of the edge which is touching another shape edge. Shape edges which do not touch another shape will not be dilated. However, for the purposes of this invention, selective dilation equates to conditional dilation, but is intended to further include the dilation of those shape edges which are only perpendicular to the fast scan direction, or in the alternative only perpendicular to the slow scan direction of an imaging marking process.

Detail Description Paragraph:
[0029] As may be observed with regard to marker line 104, edge 101 has been moved one pixel in the morphological dilation of shape 100. Alternatively, edge 103 has been shifted two pixel locations by the selective dilation of shape 102. The amount of dilation will vary depending upon the particular system the invention is to be applied to and will ultimately be empirically based. One to eight pixel locations is considered typical in a preferred embodiment. The amount of dilation may also vary as with regards to edge orientation. For example vertical edges or edges perpendicular to the fast scan direction may ideally receive less, or more, or even no dilation than horizontal edges or edges perpendicular to the slow scan direction.

☐ 3. Document ID: US 20040057080 A1

L3: Entry 3 of 3 File: PGPB Mar 25, 2004

DOCUMENT-IDENTIFIER: US 20040057080 A1
TITLE: Method of selective edge softening and rendering for the suppression of halo

Detail Description Paragraph:
[0027] FIG. 2 shows a possible result to the data in FIG. 1 after dilation. Shapes 100 and 102 have been dilated and softened, which results in the moving of their respective edges 101 and 103, some number of pixel locations outward relative to the center of their respective shapes, and introducing new pixel values to give the edge a preferred magnitude and gradient of values. In a preferred embodiment, the dilation is selective. Selective dilation here is the same as conditional dilation but has wider meaning and applicability. To explain selective dilation we must first discuss what conditional dilation is. In the art, conditional dilation is applied where the dilated result would lie within a predefined set. In the present case, a neighboring edge would be that predefined object. This means typically that only the shape edges which are touching or coincident with the edge of another shape edge are morphologically dilated. The dilation is performed only on that part of the edge which is touching another shape edge. Shape edges which do not touch another shape will not be dilated. However, for the purposes of this invention, selective dilation equates to conditional dilation, but is intended to further include the dilation of those shape edges which are only perpendicular to the fast scan direction, or in the alternative only perpendicular to the slow scan direction of an imaging marking process.

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Term	Documents
SELECTIVE	594728
SELECTIVES	101
EDG$5	0
EDG	1179
EDGA	56
EDGABLE	4
EDGABLE*	1
EDGAC	2
EDGADITO	2
EDGADR	1
EDGAE	3
((EDG$5 OR BORDER$5 OR BOUNDAR$5) WITH (SELECTIVE NEAR1 DILAT$5)).PGPB,USPT,EPAB,JPAB,DWPI,TDBD.	3

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☐ 1. Document ID: US 20050062995 A1

Using default format because multiple data bases are involved.

L1: Entry 1 of 7 File: PGPB Mar 24, 2005

PGPUB-DOCUMENT-NUMBER: 20050062995
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20050062995 A1

TITLE: Method of selective edge softening and rendering for the suppression of halo

PUBLICATION-DATE: March 24, 2005

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Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw Desc | Ima

☐ 2. Document ID: US 20040085557 A1

L1: Entry 2 of 7 File: PGPB May 6, 2004

DOCUMENT-IDENTIFIER: US 20040085557 A1
TITLE: Method of selective edge softening and rendering for the suppression of halo

Detail Description Paragraph:
[0027] FIG. 2 shows a possible result to the data in FIG. 1 after dilation. Shapes 100 and 102 have been dilated and softened, which results in the moving of their respective edges 101 and 103, some number of pixel locations outward relative to the center of their respective shapes, and introducing new pixel values to give the edge a preferred magnitude and gradient of values. In a preferred embodiment, the dilation is selective. Selective dilation here is the same as conditional dilation but has wider meaning and applicability. To explain selective dilation we must first discuss what conditional dilation is. In the art, conditional dilation is applied where the dilated result would lie within a predefined set. In the present case, a neighboring edge would be that predefined object. This means typically that only the shape edges which are touching or coincident with the edge of another shape edge are morphologically dilated. The dilation is performed only on that part of the edge which is touching another shape edge. Shape edges which do not touch another shape will not be dilated. However, for the purposes of this invention, selective dilation equates to conditional dilation, but is intended to further include the dilation of those shape edges which are only perpendicular to the fast scan direction, or in the alternative only perpendicular to the slow scan direction of an imaging marking process.

Detail Description Paragraph:
[0028] The selective dilation may also be included in the same operation as selective softening. Selective softening is the modification of pixel gray values to be values other than those found in the pixel edge. The resulting edge values may be the same as the previous edge values, be of a lowered value, higher value, or possess a gradient. They may also employ a gradient to a static lower (or higher) value i.e. plateau, or any other combination of the above. In the application of halo suppression in a preferred embodiment image-on-image marking process it has been found that edge values that possess a slight gradient to a lower value are preferred, thereby generating a "softer" appearing edge. However, the present invention is not limited to the softening of an edge, and certain marking and viewing processes may require a sharpening. We will refer to the modification of the edge values simply as softening.

Detail Description Paragraph:
[0029] As may be observed with regard to marker line 104, edge 101 has been moved one pixel in the morphological dilation of shape 100. Alternatively, edge 103 has been shifted two pixel locations by the selective dilation of shape 102. The amount of dilation will vary depending upon the particular system the invention is to be applied to and will ultimately be empirically based. One to eight pixel locations is considered typical in a preferred embodiment. The amount of dilation may also vary as with regards to edge orientation. For example vertical edges or edges perpendicular to the fast scan direction may ideally receive less, or more, or even no dilation than horizontal edges or edges perpendicular to the slow scan direction.

Detail Description Paragraph:
[0030] It is the area of selective dilation which is the focus for treatment in this invention. This area of dilation is the region between marker line 104 and the edges 101 and 103 as found in FIG. 2 after the morphological dilation of their respective shapes, 100 and 102. It is this region which is to receive edge softening and dithering or halftoning. FIG. 2 depicts an edge softening gradient where the grayscale values drop off. Shape 102 grayscale value of 128 drops to 100, then 80, and then 70 as it proceeds into the area of dilation. Shape 100 which has a dilated area only one pixel wide drops from its grayscale of 192 to a value of 170 in the dilation region. There are various approaches to achieving this in the art. In a preferred embodiment the use of LUT (look up tables) is employed to both find an edge and to make the appropriate changes to the area of dilation and the edge data.

Detail Description Paragraph:
[0034] Region 301 of shape 102 in this preferred embodiment depicted in FIG. 3 represents more than just dithered treatment of a dilated region. Examining marker line 104 we see that it also includes a one pixel wide area inside the original edge of the shape 102, an area captured by erosion. This figure shows how edge softening can begin within a shape 102 as well as without that shape as discussed above. This is achieved via a selective erosion of a copy of the original data. The eroded copy is subtracted from a copy of the original to yield just the areas of selective erosion. These areas of selective erosion are combined with the areas of selective dilation for dithering. The result of that operation is XOR with the original data after it has been halftoned. It is a composite of that result which is depicted in FIG. 3.

Detail Description Paragraph:
[0052] There are a variety of approaches apparent to those skilled in the art that may be taken in image processing system 430 for processing received original image data 420 so as to produce binary data 440 for selective edge softening. It will also be appreciated by those skilled in the art that the exact type and pattern of edge dithering utilized will vary depending upon the particulars of print engine 450. One approach comprises essentially the steps of storing the incoming data 420 in a buffer or memory; replicating or copying incoming data 420 in a memory work space; performing a selective dilation/erosion upon the work space data followed by; XOR of that result with another copy of the original incoming data 420, then; dithering that result, and; finally performing an XOR operation of that work space result upon the original incoming data 420 as stored in a buffer memory (or upon a copy of the original incoming data 420). This will place selectively dithered edges into the image to overcome halo problems.

Detail Description Paragraph:
[0053] An image description language such as PostScript.TM. will achieve the edge softening in much the same manner as described above, but will utilizing trapping. Trapping is a selective dilation typically used to ameliorate halo effects. However, here the trapping result is tagged for dithering or edge softening. That dithered and/or softened result is then substituted back into either a processed or an unprocessed version of the image. In one embodiment the result is substituted into the original image with an XOR operation after that original has received application of the system halftone. Please note that edge modification operations are often performed on image types other than digital pixelated images. For instance, edge trapping is often performed on a vector (functional, PDL, . . .) form of an image. The present invention also applies in that setting. One such usage in that setting is an improvement over current trapping practices in the art. The improvement includes inserting a trap object (dilated edge) in functional or digital form, where the trap possesses values as described above [softened gradient, . . .]. Further, a tag denoting that the object is a trap or denoting a preferred rendering process for the object may be created and adjoined to the electronic file describing the image. Subsequent digitization and rendering modules may then selectively render the trap objects according the tag information. In some Digital Front Ends (DFEs) one or more of the above processing modules may be combined into a single module.

☐ 3. Document ID: US 20040057080 A1

L1: Entry 3 of 7 File: PGPB Mar 25, 2004

DOCUMENT-IDENTIFIER: US 20040057080 A1
TITLE: Method of selective edge softening and rendering for the suppression of halo

Detail Description Paragraph:
[0027] FIG. 2 shows a possible result to the data in FIG. 1 after dilation. Shapes 100 and 102 have been dilated and softened, which results in the moving of their respective edges 101 and 103, some number of pixel locations outward relative to the center of their respective shapes, and introducing new pixel values to give the edge a preferred magnitude and gradient of values. In a preferred embodiment, the dilation is selective. Selective dilation here is the same as conditional dilation but has wider meaning and applicability. To explain selective dilation we must first discuss what conditional dilation is. In the art, conditional dilation is applied where the dilated result would lie within a predefined set. In the present case, a neighboring edge would be that predefined object. This means typically that only the shape edges which are touching or coincident with the edge of another shape edge are morphologically dilated. The dilation is performed only on that part of the edge which is touching another shape edge. Shape edges which do not touch another shape will not be dilated. However, for the purposes of this invention, selective dilation equates to conditional dilation, but is intended to further include the dilation of those shape edges which are only perpendicular to the fast scan direction, or in the alternative only perpendicular to the slow scan direction of an imaging marking process.

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halftone. Please note that edge modification operations are often performed on image types other than digital pixelated images. For instance, edge trapping is often performed on a vector (functional, PDL, . . .) form of an image. The present invention also applies in that setting. One such usage in that setting is an improvement over current trapping practices in the art. The improvement includes inserting a trap object (dilated edge) in functional or digital form, where the trap possesses values as described above [softened gradient, . . .]. Further, a tag denoting that the object is a trap or denoting a preferred rendering process for the object may be created and adjoined to the electronic file describing the image. Subsequent digitization and rendering modules may then selectively render the trap objects according the tag information. In some Digital Front Ends (DFEs) one or more of the above processing modules may be combined into a single module.

CLAIMS:

15. The digital imaging system of claim 3, wherein morphological manipulation comprises: storing the document image in a first memory space; replicating the document image as a working image in a second memory space; selectively dilating the working image to produce a first resultant working image; isolating the selectively dilated areas in the first resultant working image to produce a second resultant working image; halftoning the isolated selectively dilated areas in the second resultant working image; and, performing an XOR operation of the second resultant working image with the document image in the first memory space, to thus produce selectively softened edges in the stored document image.

☐ 4. Document ID: US 6832007 B1

L1: Entry 4 of 7 File: USPT Dec 14, 2004

DOCUMENT-IDENTIFIER: US 6832007 B1
TITLE: Method and system for compensating for scaling artifacts in mixed raster content (MRC) representations

Detailed Description Text (9):
To reconstruct the image, the MRC file is segregated 52 into the compressed selected plane 14', upper plane 12' and lower plane 16'. Decompressors 53, 54, 55 respectively convert the files into decompressed data files. Enlarger 56 restores the reduced lower plane data by scaling up the data in response to whatever scaling algorithm was employed. As noted in FIGS. 2(b) and 2(c), such a reconstruction can cause artifacts. FIGS. 3(b) and 3(c) illustrate how such artifacts can occur. However, FIG. 3(e) illustrates the reconstructed original image of FIG. 3(d) after it had been dilated by one pixel value, scaled by one-half and enlarged by two with the nearest neighbor reconstruction algorithm, and shows that all the pixel values within the boundary 30 are restored to their intended and appropriate data value, "0". Similarly, FIG. 3(f) illustrates the original image which had been dilated by one, scaled by one-half, enlarged by two after compression utilizing an interpolation algorithm, has some artifacts at column 14 and row 14. FIG. 3(i) illustrates that if the dilation comprises replicating two pixel values, then these artifacts can also be removed. Accordingly, when a nearest neighbor reconstruction is employed, dilation by one pixel value in all dimensions is preferred, but when linear interpolation is selected, then dilation by two pixel values in all dimensions is preferred.

☐ 5. Document ID: US 6179858 B1

L1: Entry 5 of 7 File: USPT Jan 30, 2001

DOCUMENT-IDENTIFIER: US 6179858 B1
TITLE: Stent expansion and apposition sensing

Brief Summary Text (11):
The invention is inexpensive, requires no extra time to use, and can be constructed in versions that can provide either simple binary apposed/non-apposed information or can monitor the continuum of the stent ends' approach to apposition. Knowledge of the degree of apposition prevents the need to overexpand the stent with attendant risks of deep vessel injury. The invention may be constructed in such a manner to provide localized apposition data limited to a particular region of the proximal/distal edge of the stent, allowing the operator to selectively further dilate a particular side, and alerting the operator of suboptimal stent expansion patterns.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWMC | Draw Desc | Ima

☐ 6. Document ID: TW 200419311 A, US 20040188547 A1

L1: Entry 6 of 7 File: DWPI Oct 1, 2004

DERWENT-ACC-NO: 2004-708107
DERWENT-WEEK: 200608
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TITLE: Liquid e.g. photoresist fluid, dispensing nozzle for e.g. industrial application, has shutter plate narrowing dispensing opening as liquid is dispensed onto edge or peripheral regions of substrate

Basic Abstract Text (1):
NOVELTY - The nozzle (26) has a housing (28) with a dispensing opening (31) that dispenses liquid (54) from the housing. A shutter plate (44) is provided in the housing to selectively dilate and constrict the opening. The plate narrows the opening as the liquid is dispensed onto edge or peripheral regions of a substrate. The shutter plate widens the opening as the liquid is dispensed onto a central region of the substrate.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWMC | Draw Desc | Ima

☐ 7. Document ID: US 6179858 B1

L1: Entry 7 of 7 File: DWPI Jan 30, 2001

DERWENT-ACC-NO: 2001-289316
DERWENT-WEEK: 200130
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TITLE: Endoluminal device apposition sensing system includes sensor which provides electrical parameter indicating apposition pressure of end of endoluminal device to inner wall of lumen

Basic Abstract Text (6):
ADVANTAGE - The system is constructed so that localized apposition data limited to particular region of proximal/distal edge of stent is offered, thereby allowing operator to selectively dilate particular side of and alerting operator of sub-optimal stent expansion patterns. Knowledge of degree of apposition prevents need to over-expand stent with attendant risks of deep vessel injury.

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Term	Documents
EDG$5	0
EDG	1179
EDGA	56
EDGABLE	4
EDGABLE*	1
EDGAC	2
EDGADITO	2
EDGADR	1
EDGAE	3
EDGAGED	1
EDGAGES	1
(((EDG$5 OR BORDER$5 OR BOUNDAR$5) SAME(SELECT$5 NEAR1 DILAT$5))).PGPB,USPT,EPAB,JPAB,DWPI,TDBD.	7

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